10/522454
DT01 Rec'd PCT/PTO 20 JAN 2005

In the Claims

Please amend the claims as follows:

1. (Previously presented) An isolated actinomycete which produces manzamine.

2. (Previously presented) The actinomycete according to claim 1, wherein the actinomycete is *Micromonospora* sp.

3. (Previously presented) The actinomycete of claim 2 where the manzamine produced is manzamine A or 8-hydroxymanzamine A.

4. (Currently amended) An isolated actinomycete which produces manzamine according to claim 2 and which comprises a 16S rRNA having a nucleotide sequence of SEQ ID NO: 1.

5. (Currently amended) An isolated actinomycete which produces manzamine according to claim 1 and which comprises a 16S rRNA that hybridizes under medium or high stringency conditions to SEQ ID NO: 1.

6. (Cancelled)

7. (Previously presented) The isolated actinomycete according to claim 4, wherein the actinomycete is *Micromonospora* sp.

8. - 9. (Cancelled)

10. (Previously presented) The isolated actinomycete of claim 4, where the manzamine produced is manzamine A /or 8-hydroxymanzamine A.

11. (Previously presented) The isolated actinomycete of claim 5, where the manzamine produced is manzamine A and/or 8-hydroxymanzamine A.

12. (Cancelled)

13. (Previously presented) The isolated actinomycete according to claim 4, wherein the actinomycete is a *Micromonospora sp.* M42.

14. (Currently amended) A method of isolating a manzamine-producing actinomycete comprising the steps of:

a) identifying a bacteria containing a 16S rRNA comprising a nucleotide sequence of SEQ ID NO: 1 or that hybridizes to SEQ ID NO: 1, under high stringency conditions;
b) screening bacteria for manzamine producing ability; and
c) selecting those bacteria having manzamine producing ability.

15. (Previously presented) The method of claim 14, further comprising the step of screening bacteria to determine actinomycete morphology prior to step a).

16. - 18. (Cancelled)

19. (Previously presented) An isolated polynucleotide as set forth in SEQ ID NO:1.

20. (Cancelled)

21. (Currently amended) A method for producing a manzamine by fermentation, the method comprising:

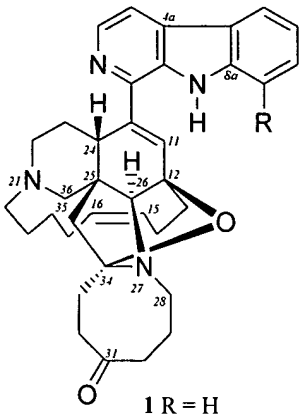
a) culturing an actinomycete having manzamine producing ability which comprises a 16S rRNA having a nucleotide sequence of SEQ ID NO: 1 in a culture medium suitable for the growth of the actinomycetes and production of manzamine; and
b) separating the manzamine from the culturing medium.

22. (Previously presented) The method according to claim 21, wherein the culturing medium is maintained at a salinity in the range of about 15 ppt to about 25 ppt.

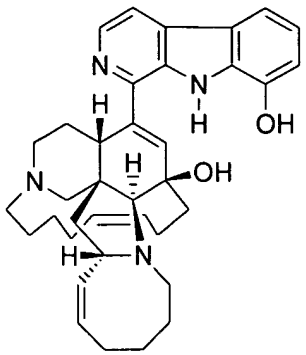
23. (Previously presented) The method according to claim 21, wherein the actinomycete is *Micromonospora* sp.

24. (Previously presented) The method according to claim 21, wherein the manzamine produced by the actinomycetes precipitates in the culturing medium.

25. (Currently amended) The method according to claim 21, wherein the ~~A~~ manzamine compound comprising a structure selected from the group consisting of



1 R = H
2 R = OH



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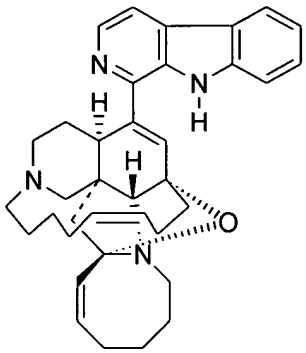
and



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26.- 27. (Cancelled)

28. (Currently amended) A method for detecting a bacteria having manzamine producing ability, the method comprising the steps of:

(a) mixing at least a fragment or ~~of~~ a complement of the polynucleotide sequence of SEQ ID NO: 1, with a biological test sample containing nucleic acids from a bacteria suspected of having manzamine generating ability, to form a resulting mixture;

(b) subjecting the mixture to high stringency hybridization conditions such that hybridization will occur between the biological test sample and the fragment or the complement of the polynucleotide sequence of SEQ ID NO: 1; and

(c) detecting hybridization complexes in the mixture subjected to hybridization conditions, wherein the presence of a hybridization complex correlates with the presence of a polynucleotide consisting essentially of SEQ ID NO: 1 in the biological test sample.